

REMARKS

Currently pending claims are 16, 19-21, 30 and 31. Claim 16 is amended to correct "CO" to "Co". New claims, Claims 32-36 are presented. No new matter is added; these claims were present as Claims 6-9 in the originally filed application.

Applicants note with appreciation allowance of Claim 31 and the apparent indication of allowable subject matter in Claim 30.

A declaration of inventor Dr. Armin Olbrich is submitted in connection with this response.

Rejections under 35 U.S.C. §103

Claims 16, 19 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over SU 548,570 A ("SU '570") combined with Provance et al., U.S. 4,317,749. Applicants respectfully traverse this rejection.

In the process of the present invention, agglomerated cobalt (II) carbonate having a spheroidal secondary structure and an average agglomerate diameter of 3 μ m to 50 μ m is reacted in suspension with aqueous alkaline liquors or ammonia to produce agglomerated cobalt (II) hydroxide also having a spheroidal secondary structure and an average agglomerate diameter of 3 μ m to 50 μ m. The spheroidal feature of the cobalt hydroxide agglomerates of the present invention is completely ignored in the Office Action, when in fact it is an important feature of the invention. None of the cited references teach how to make an agglomerated cobalt (II) hydroxide having the claimed particle size and shape.

As conceded in the Office Action, neither SU '570 or Provance et al. teach the use of a suspension; both use a paste. Yet somehow, these references are combined to render the use of a suspension "obvious". It is asserted in the Office Action that a suspension is merely the addition of water to a paste, and that one skilled in the art would be motivated to add water to the paste of SU '570 or Provance et al. for ease of processing. This analysis is incorrect. As set forth in the declaration of Dr. Armin Olbrich, the suspension of the present invention is not equivalent to a paste with the addition of water, and a defined particle shape and size cannot be achieved merely by the addition of water to a paste. The unique properties of the agglomerated cobalt(II) hydroxide of the present invention are

achieved by use of a continuous process and independent control of process parameters. The disclosures of SU '570 and Provance et al. say nothing to one skilled in the art regarding how to achieve the particle shape and size of the present invention.

Provance et al. is apparently cited for the disclosure of a paste of cobalt salts having a particle size falling within the size specified in Claim 16. It is asserted that if one uses starting materials of a certain particle size then the end product will also have the same particle size. As explained by Dr. Olbrich, in principle this is correct; an educt of a certain particle size will yield a product of a similar particle size. However, none of the educts disclosed in any of the cited references are said to be spherical (nor are they inherently so), and consequently, none of the products will have a spherical secondary structure.

Additionally, Provance et al. is not relevant to the present invention; it is in a separate class entirely. Provance et al. discloses the use of a cobalt oxide in a thick film conductor paste which is coated on a substrate and fired at temperatures of 500°-1,000° C. This has absolutely nothing to do with the present invention, and one skilled in the art would not look to Provance et al. for guidance in producing the agglomerated cobalt hydroxide particles of the present invention.

Applicants respectfully submit that neither SU '570 or Provance et al., taken alone or in combination, disclose the process of the present invention. Applicants request withdrawal of the §103 rejection of Claims 16, 19 and 20.

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over SU '570, and further in view of JP 90-168385 ("JP '385"). Applicants respectfully traverse this rejection.


JP '385 discloses a process that involves forming cobalt hydroxide from a Co 2+ containing ion which is CoCl₂, Co(NO₃)₂, Co acetate or CoSO₄. No cobalt carbonate is disclosed. The cobalt hydroxide is separated, dewatered and roasted to form cobalt oxide. The reference says nothing about the nature of the cobalt hydroxide, which, since it is not even formed from the same starting materials as the present invention, cannot remotely resemble the spheroidally agglomerated cobalt hydroxide particles of the present invention. Since SU '570 does not disclose a process of preparing spheroidally agglomerated cobalt(II) hydroxide, and JP '385

does not disclose this either, even in combination they do not provide the missing teaching. Applicants respectfully submit that Claim 21 is not obvious in view of SU '570 combined with JP '385 and request withdrawal of this basis of rejection.

CONCLUSION

Applicants respectfully submit that Claims 16, 19, 20, 21, 30 and 31-36 are in condition for allowance; such action is respectfully requested at an early date.

Respectfully submitted,

By  _____
Joseph C. Gil
Attorney for Applicants
Reg. No. 26,602

Bayer MaterialScience LLC
100 Bayer Road
Pittsburgh, Pennsylvania 15205-9741
(412) 777-3813
FACSIMILE PHONE NUMBER:
(412) 777-3902

f:\shared\kpl\da228.res